cLear

PW's ongoing efforts to provide the cleanest, best-tasting water possible were recognized by the Partnership for Safe Water with a Ten-Year Director's Award for water quality.

2011 Water Quality Report

Customer Service Department 270.442.2746
Water Quality Department 270.442.2746
website: pwwky.com

Paducah Water PWSID 0730533

welcome

to Paducah Water's Annual Report of Water Quality.

Inside you will find detailed information about the water you use everyday. Plus, departmental summaries will outline the achievements of the past year and give you a glimpse at PW's future plans. If you have questions about PW, we encourage you to contact a customer service representative.

overview

First and foremost, I, along with the entire Paducah Water staff, want to thank you for giving us the opportunity to provide you with the cleanest, clearest, best-tasting water we can at the lowest possible price. We realize that you depend on PW and that water plays a vital role in the health of you and your family. I assure you we do not take this responsibility lightly. The health of our customers is our top priority and we demonstrate that every hour of every day. We constantly monitor water quality and consistently rank near the top in terms of water quality in the Commonwealth.

We again have bested all state and federal regulatory standards. Plus, as a member of The Partnership for Safe Drinking Water, we have exceeded those stringent measures. The Partnership for Safe Drinking Water is a voluntary program administered by the American Water Works Association and membership requires that PW perform an annual assessment of our treatment facility and processes along with meeting certain compliance levels that are set higher than regulatory standards. We continue to excel as a member and were again honored with an award from the Partnership.

You can read much more about our water quality and health standards in the Water Quality section of this report. And please take a few minutes to review the water quality charts.

While this report focuses on our accomplishments of 2010, the recent 2011 flood is still in the forefront of our customers' minds and in the Engineering and Distribution section of this report you will read about our performance during this once-in-a-lifetime event.

Also in the Engineering and Distribution section, you will be briefed on the final phases of our multi-year Reidland project. The $7.5 million project was completed in October.

Finally, PW's customer service team continues to work to make it easier for our customers to do business with us. In the last year we have made several changes in response to how our customers want to conduct business with us. We have seen a huge increase in telephone call volume in the last year, as well as Internet traffic and credit card payments. You will read more about our customer service enhancements in the Customer Service section of this report.

Again, the entire PW team thanks you for putting your trust in us and for helping make us the Clear Clean Choice in our community.

Glen Anderson
General Manager

water Quality

Our Water Quality team once again met all regulatory agencies' requirements. Further, Paducah Water's Microbiology Lab passed the mandated yearly performance evaluation and audit for certification in Kentucky.

Many customers take water for granted, but even more so – take healthy water for granted. At PW, that is never the case. We strive everyday to ensure we are providing our customers with the cleanest, best-tasting and healthiest water we can. It was not long ago, that communities large and small did not have access to healthy drinking water. And, we never forget that even in this day and age, there are still parts of the world without potable water.

To that end, PW's water quality efforts include constant testing of water, not only at the treatment facility but also throughout the system. Water samples are taken from various points in PW's service area including businesses, homes and other test points. The sample sites are selected randomly each day. PW performs more than 300 water quality tests every day in the company's onsite, state certified, Wet Chemistry and Microbiology Lab.

PW's Water Quality Supervisor, Mindy Martin, oversees the testing and labs. Martin holds a Bachelor of Science Degree from Murray State University and maintains Kentucky's Safe Drinking Water Certification.

Also again this year, PW was honored with an achievement award from the Partnership for Safe Drinking Water. The program is voluntary and administered by the American Water Works Association, of which PW is a member. To receive an achievement award, PW must meet standards in water quality that are higher than state and federally mandated levels.

The Clear Clean Choice is not merely a slogan or a clever catch phrase for us. It is the heart and soul of PW and those three little words speak volumes to the efforts of our Water Quality Team to provide the community with healthy drinking water.

eNgineering & distribution

Paducah Water's Engineering and Distribution Department is ultimately responsible for the treatment your water, the delivery of water to your home or business and planning for future growth of the system. These are complex jobs and our team of experts collectively shares hundreds of years of training and experience. Everything from digging a trench and setting a new water main to determining the proper pressure necessary to get water from Point A to Point B falls to the Engineering and Distribution Department.

In 2010, the job was especially challenging. The department completed the $7.5 million Reidland Project and last summer PW customers set a new record in water use.

Last summer, PW set record highs for hourly, daily and monthly water usage. Our customers used 266.8 million gallons of water across the system just in the month of August beating the previous record of 221.7 million gallons in August of 2009 by more than 20 percent. In addition to the monthly record, PW set a new record in peak daily use of a little more 13 million gallons. More impressive was PW's ability to meet a record demand of 9,700 gallons per minute.

In October, PW completed one of the largest capital projects undertaken since the construction of the North Eighth Street treatment plant nearly 30 years ago. The $7.5 million Reidland Project moved the treatment of water for the Reidland area from the outdated Reidland treatment facility to the Paducah plant. The project included installation of 37,000 feet of new water main along with construction of a 2 million gallon storage tank and pump station on I. C. Avenue. This year, PW dismantled the old elevated storage tank in Reidland and prepare the treatment facility property for sale. The Reidland project was completed on time and on budget and is a testament to the skill and planning of the Engineering and Distribution Team.

In addition to completing the Reidland Project, PW Distribution Department crews and contractors finished water main replacement projects on Lone Oak Road, Lakeview Drive, 23rd and 24th Streets, Bethel Street, Bloom Avenue, New Holt Road, Hill Street, Bell Avenue, Starke Avenue and Markham Avenue. Combined, these projects represent more than $1 million of capital investment back into the infrastructure. More water main replacements are planned for the coming year as part of our comprehensive effort to address the aging system. These improvements ensure that we will continue to provide reliable service in the years to come.

Of course, we can't talk about water without mentioning the historic flood that occurred a few short weeks ago. Many of our customers have had questions about how a flood of such epic proportions affected PW's ability to continue to provide service to our customers. The simple answer is, it really didn't. While drought conditions can sometimes be a challenge, flood conditions generally do not impact PW operations. The main concern during flooding is the potential for debris to block our intake screens in the river. During flood events, there is a dramatic increase in river debris such as tree limbs, which can create those blockages. During this once-in-a-lifetime event, PW intakes remained clear, or were cleaned, and we continued regular round-the-clock operations at our treatment facility and pumping stations.

In addition to all the tasks that you would expect to fall under the Engineering and Distribution umbrella, there is one vital role the department plays that is virtually unnoticed. PW is responsible for the inspection and maintenance of more than 3,600 fire hydrants throughout the service area. A dedicated crew works year round systematically flushing the entire distribution system through the hydrants while ensuring each one is in operational condition.

customerService

Paducah Water's Customer Service Team is the most visible part of the company's operation. Water Quality, Engineering and Distribution happen in the background and PW customers rarely have any interaction with those team members – their efforts "just work" and our customers don't have to worry about how. On the other hand, PW's Customer Service Team is front and center of every interaction. If you have a question about a bill – Customer Service; want to establish a new service – Customer Service; need to pay a bill – you guessed it, Customer Service. Our talented team of front office employees makes sure that your monthly statement is correct, that your questions are answered and that any problems you have with your water service are addressed quickly. Then there are the "back office" team members. These are the employees that take care of everything from budgeting to human resource management. These two arms of the same body work in tandem to keep the company up and running.

In the last year our front office employees began to notice a growing customer trend. Fewer and fewer PW customers were visiting the business office in person, while conversely more and more were calling or using the Internet to conduct business with us. While this trend is not unique to PW, it is rather new to us. Utility customers in general and PW customers specifically, have traditionally visited the office to establish service, make payments and conduct other business. While PW customers were a little later in making the jump from personal visits, PW knew the day was coming and 2010 is really when we saw a tipping point in our customer transactions.

To be honest, we were both prepared and not prepared. For several years, PW has had an Internet presence and a couple of years ago, we added the ability to pay your water bill online using your credit or debit card as well as the ability to make payments over the phone. In 2010, we dramatically enhanced our online presence. PW completely redesigned the company website, pwwky.com, from the ground up. We made it even easier to ask questions, and simplified navigation of our site so customers can find what they are looking for - usually with just a single click of the mouse.

However, we found ourselves unprepared for the dramatic increase in telephone call volume that has occurred in the last few years. Customers were having more and more trouble getting through to a Customer Service Representative and in many cases even getting past a busy signal. We will be the first to say we dropped the ball a little when it came to providing efficient service via phone. But, at PW, we think what would be unforgiveable is to realize we are not living up to our customers expectations then choosing to do nothing about it. So, we are taking action!. We have increased the availability of Customer Service Representatives to answer calls and will soon have a simple call routing system to make sure your call gets to the right person as quickly as possible. We have heard over and over again from our customers and members of our own families how much people dislike the dreaded phone tree. Press One for… how frustrating! Be assured that while we are adding this tool we do so knowing the possible pitfalls. Customers will never be more than one button push away from a real human being and we are simply using the service on the front end to better route calls and balance call volume. This effort should ultimately cut wait times and virtually eliminate the need to transfer calls from person to person. So, we want to hear from you and, we will listen. After a few months, if PW customers do not believe the telephone feature is performing properly or PW staff find that call wait times have not decreased and calls are still not finding their way to the right Customer Service Representative, then we will go back to the drawing board.

At the end of the day, you, the customer that pays the bill every month, is ultimately whom we work for, and that is never more top-of-mind than in PW's dedicated team of Customer Service professionals.

As always, PW encourages you to contact us if you have any questions about this report or any of PW's services and we appreciate you allowing us to provide you with clean, healthy, affordable water and making PW the Clear Clean Choice.

waterSources

The sources of the water supply for Paducah Water customers are the Ohio and Tennessee Rivers. This is considered to be a surface water source. A final source water assessment for this system has been completed and is contained in the Source Water Assessment and Protection Plan Susceptibility Analysis and Protection Recommendations for McCracken County. The completed plan is available for inspection and can be obtained at the Purchase Area Development District office at 270.247.7171. A summary of the susceptibility analysis is as follows. An analysis of the susceptibility of PW's water supply to contamination indicates that this susceptibility is generally high. There are numerous petroleum storage facilities along the Ohio and Tennessee Rivers that provide fuel to land and river transportation. Numerous bridges cross the Ohio and Tennessee Rivers as well as major tributaries such as the Clarks River and Island Creek. These bridges are of greater concern due to the possibility of hazardous materials infiltrating the water source near the intake due to traffic accidents, structural collapse of the bridge, or illegal dumping. River traffic is a concern that has become more prevalent in the past few years due in part to increased news coverage of accidents and collisions. Other potential areas of concern are Island Creek and local farming practices.

The sources of the water supply for PW's Reidland and Marshall County Customers, up to October 2010, were seven wells located in the Reidland area. These wells were considered to be a ground water source drawing water from the unconsolidated sands of the Claiborne Group in McCracken County. Since Oct. 4, 2010, these customers have been

served from the Ohio and Tennessee Rivers. Information about this surface water source is noted above. A final Source Water Assessment for the well water system was completed and is contained in the Wellhead Protection Plan Phase II for Paducah Water's Reidland Treatment Plant approved by the Kentucky Division of Water, Groundwater Branch in November 2003. The completed Source Water Assessment Plan (SWAP) is available for inspection and can be obtained at the Kentucky Division of Water at 502.564.3410 and at the Purchase Area Development District office at 270.247.7171. A summary of the susceptibility analysis is as follows. An analysis of the overall susceptibility to contamination of Paducah Water's Reidland water supply indicated that the susceptibility was high. There were a total of seven (7) potential sources of contamination within the wellhead protection area with the following susceptibility rankings: 6 high, 1 medium, and 0 low. Sources of high potential impact included: underground storage tanks, dry cleaners, and Highways 62, 131, and 284. Sources of moderate potential impact included underground storage tanks.

special information available

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

in mEmoriam

In May of last year, Paducah Water rededicated its water treatment facility on North Eighth Street in honor of long-time Water Works Commissioner, W. J. "Jim" Brockenborough.

In early 2010, Mr. Brockenborough lost his battle with cancer. After serving on Paducah Water's Board for more than 30 years, 20 of which, he served as chair, PW board members and staff felt it was appropriate to honor him by rededicating the plant he was so instrumental in building.

In 1979, Jim was appointed to the Commissioners of Waterworks Board by Mayor John Penrod. The water plant in use at the time was more than 100 years old and extremely unreliable. He nearly single-handedly championed the building of the new water treatment facility on North Eighth Street.

Efficiency and the insistence of "not playing politics" were hallmarks of Jim's tenure on the board and as chair. He even refused to allow his company, Hannan Supply, to bid on any work or materials that could be used by Paducah Water, to avoid the appearance of impropriety.

Although Jim was a humble man and avoided the spotlight of recognition, before his death, he did learn of the plans to name the plant in his honor and was very pleased.

According to his family, Jim was most proud of the work he did for PW. Without his leadership, PW would not be in the position the company is today - financially sound, and producing the highest quality water at the best price possible.

PADUCAH WATER PWSID KY0730533 Plant A, 2010

The data presented in this report are from the most recent testing done during 2010 or in prior years in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Unless otherwise noted, the report level is the highest level detected.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT[A]	No more than 1 NTU[A] Less than 0.3 NTU in 95% of monthly samples	0.14	100	No	Soil runoff

REGULATED CONTAMINANT TEST RESULTS

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
RADIOACTIVE CONTAMINANTS							
Alpha emitters [4000] (pCi/L)[B]	15	0	2.1	2.1 to 2.1	Oct. 08	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	1.0	1 to 1	Oct. 08	No	Erosion of natural deposits
INORGANIC CONTAMINANTS							
Barium [1010] (ppm)	2	2	0.019	0.019 to 0.019	Jan-10	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.192 (90th percentile)	0.01 to 0.657	July-09	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.96	0.429 to 1.251	Aug 2010	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90th percentile)	0 to 22	July-09	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.536	0.536 to 0.536	Jan-10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES							
Atrazine [2050] (ppb)	3	3	0.56	0.56 to 0.56	July 10	No	Runoff from herbicide used in row crops.
DISINFECTANTS/DISINFECTION BYPRODUCTS AND PRECURSORS							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.34 (lowest average)	1.22 to 1.57 (monthly ratios)	N/A	No	Naturally present in environment.
**Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.*							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.21 (highest average)	0.2 to 2.1	N/A	No	Water additive used to control microbes.
Chlorite (ppm)	1	0.8	0.94 (average)	0.0 to 0.99	July	No	Byproduct of drinking water disinfection.
Chlorine dioxide (ppb)	MRDL = 800	MRDLG = 800	390	0 to 390	July	No	Water additive used to control microbes.
HAA (ppb) [Haloacetic acids]	60	N/A	33 (system average)	8 to 57 (range of system sites)	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) (all sites) [total trihalomethanes]	80	N/A	46 (system average)	13 to 90 (range of system sites)	N/A	No	Byproduct of drinking water disinfection
OTHER CONTAMINANTS							
Cryptosporidium [oocysts/L]	0	TT (99% removal)	0 (positive samples)	3 (number of samples)	N/A	No	Human and animal fecal waste disinfection

[A] Turbidity: Turbidity is used to measure cloudiness in drinking water. Analysis is conducted on representative samples of filtered water. We monitor because it it a good indicator of the quality of water and the effectiveness of our filtration system.
[B] Alpha Emmitters were measured as Gross Alpha
* Treatment Technique (TT) for TOC's is based on the lowest running annual average of the monthly ratios of the % TOC removal achieved to the % TOC removal required. A minimum ratio of 1.00 is required to meet the TT.

definitions and abbreviations

Maximum Contaminant Level (MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal (MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG): the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

> - GREATER THAN < - LESS THAN

Treatment Technique (TT): a required process intended to reduce the level of a contaminant in drinking water.
Action Level (AL): the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
N/A – Not applicable, Does not apply
NTU - Nephelometric Turbidity Unit, a measure of water clarity
pCi/l – Picocuries per liter, a measure of radioactivity in water.
ppb (µg/l) – Parts per billion or micrograms per liter.
ppm (mg/l) – Parts per million or milligrams per liter.
RAA – Running annual average of all the samples taken from a sampling point.
BDL – Below Detection Levels. Labratory analysis indicates that the contaminant isn not present.

PADUCAH WATER/REIDLAND AREA PWSID KY0730368 (533 After August 19) Plant B, 2010

The data presented in this report are from the most recent testing done during 2010 or in prior accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Unless otherwise noted, the report level is the highest level detected.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT	No more than 1 NTU[A] Less than 0.3 NTU in 95% of monthly samples	0.11	100	No	Soil runoff

REGULATED CONTAMINANT TEST RESULTS

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
RADIOACTIVE CONTAMINANTS							
Alpha emitters[A] [4000] (pCi/L)	15	0	5.6	5.6 to 5.6	May 08	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	2.0	2.0 to 2.0	May 08	No	Erosion of natural deposits
INORGANIC CONTAMINANTS							
Barium [1010] (ppm)	2	2	0.093	0.093 to 0.093	Jan-08	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.003 (90th percentile)	0.003 to 0.003	Jan-09	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.98	0.777 to 1.135	Aug.-10	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90th percentile)	0 to 7	Sept.-08	No	Corrosion of household plumbing system
DISINFECTANTS/DISINFECTION BYPRODUCTS AND PRECURSORS							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.21 (highest average)	0.2 to 2.1	N/A	No	Water additive used to control microbes.
HAA (ppb) [Haloacetic acids]	60	N/A	28 (system average)	8 to 57 (range of system sites)	N/A	No	Byproduct of drinking water disinfection.
TTHM (ppb) [total trihalomethanes]	80	N/A	44 (system average)	13 to 74 (range of system sites)	N/A	No	Byproduct of drinking water disinfection.

[A] Alpha Emmitters were measured as Gross Alpha

Paducah Water
P.O. Box 2377
Paducah, KY 42002-2377

paducah water contact information

If you are interested in learning more about the water department and water quality, there are a number of opportunities available. Questions about water service may be answered by calling our Customer Service office at 270/442-2746. Questions about water quality may be answered by calling our Water Quality Department at 270/442-2746.

The members of the Commissioners of Waterworks meet at 5:00 p.m. on the last Wednesday of each month at the Paducah Water Works office, 401 Washington Street. Board sessions are open to the public.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and may pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *(A)* *Microbial contaminants,* such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *(B)* *Inorganic contaminants,* such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *(C)* *Pesticides and herbicides,* which may come from a variety of sources such as agricultural, urban stormwater runoff, and residential uses.
- *(D)* *Organic chemical contaminants,* including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *(E)* *Radioactive contaminants,* which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Hotline (800/426-4791).**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Paducah Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from Safe Drinking Water Hotline of at http://wwwepa.gov/safewater/lead.

For questions about the quality of our drinking water or about this report, call Paducah Water's Water Quality Department at 270/442-2746